

# IB IL SGI 1/CAL - Inline terminal



2700064

<https://www.phoenixcontact.com/us/products/2700064>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.

Inline analog strain gauge input terminal, without accessories, evaluating electronics with EC type approval



## Product description

The terminal is designed for use within an Inline station. This terminal can be used as a robust and precise piece of evaluation electronics to set up non-automatic weighing instruments (NAWI). The terminal block satisfies the EC type approval as an electronic evaluating device to set up non-automatic weighing instruments (NAWI) of commercial class III with 3,000 scale intervals or class III ordinary scales with 1,000 scale intervals in accordance with the EN 45501 and OIML R76 standards. A network-compatible serial interface can be used to connect primary and secondary displays for displaying measured gross/net and tare values to the evaluating electronics. The measurement and configuration data is transmitted via the parameter channel (PCP). The terminal has an alibi memory to store up to 65536 measurement protocols, including date and time. A specific DTM enables easy commissioning and data management (e.g., of the measurement protocols).

## Your advantages

- 1 input for DMS
- Serial interface for external weight displays
- Connection of strain gauges in 6-conductor technology
- Electronic evaluating device to set up non-automatic weighing instruments (NAWI)
- Can be calibrated by EC type approval according to standards EN 45501 and OIML R76
- Alibi storage for up to 65536 test reports
- Zero point, tare, and standstill display
- Up to 3000 pitch values
- Parameterization and calibration using FDT/DTM technology
- Various filter settings

## Commercial data

Item number	2700064
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DRI144
GTIN	4046356484022
Weight per piece (including packing)	182.5 g
Weight per piece (excluding packing)	160 g
Country of origin	DE

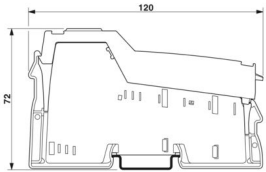
# IB IL SGI 1/CAL - Inline terminal

2700064

<https://www.phoenixcontact.com/us/products/2700064>

## Technical data

### Dimensions

Dimensional drawing	
Width	48.8 mm
Height	120 mm
Depth	71.5 mm
Note on dimensions	Dimensions with covering hood

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
----------	---

### Material specifications

Color	green
-------	-------

### Interfaces

#### Inline local bus

Connection method	Inline data jumper
Transmission speed	500 kbps

#### Serial

Designation	RS-485
Network	Yes
Addressing	Address 0 = Broadcast, alternating display of measured gross/net value and measured tare value
	Address 1 = Measured gross/net value
	Address 2 = Measured tare value
	Address 3 ... 9 = reserved
Termination resistor	120 $\Omega$
Transmission protocol	STX/ETX

### System properties

Memory type	Measurement protocol memory Alibi memory: non-volatile Flash memory 20 years
-------------	--

#### Programming data (LocalbusSlave)

Length code (hex)	02
-------------------	----

ID code (dec.)	220
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Parameter channel (PCP)	4 Byte
Register length (bus)	64 bit

#### Fieldbus data telegram

Required parameter data	23 Byte
Required configuration data	5 Byte

## Input data

#### Analog

Description of the input	Input channel for strain gauge
Number of inputs	1
Connection technology	6-wire, twisted pair shielded cable
Bridge difference $U_d$	Measuring range specified by selecting the characteristic
Bridge voltage $U_0$	5 V
Measured value representation	Process data: status bits and measured value including decimal places of the gross/net display PCP: see PCP; test report meets the requirements of DIN EN 45501 and OIML R76
Process data update	typ. 100 ms
Characteristics	$\pm 1$ mV/V, $\pm 2$ mV/V, $\pm 3$ mV/V, $\pm 3.33$ mV/V, $\pm 4$ mV/V, $\pm 5$ mV/V

#### Contacts

Description	Lock of parameters
Quantity	1 (PS <sub>a</sub> - PS <sub>b</sub> )
Logic	PS <sub>a</sub> - PS <sub>b</sub> connected = Parameter locked
Typical response time	< 100 ms

## Output data

#### Analog:

Protective circuit	Short-circuit protection of the voltage outputs; Yes, at least 1 minute through temperature monitoring
--------------------	--

#### Analog

Output description	Voltage output
Number of outputs	1
Impedance	> 55 $\Omega$ max. 5 k $\Omega$
Output voltage	typ. 5 V $\pm 2$ % max. 5 V $\pm 5$ %
Output current	max. 90 mA

# IB IL SGI 1/CAL - Inline terminal



2700064

<https://www.phoenixcontact.com/us/products/2700064>

Maximum output current	max. 90 mA
------------------------	------------

## Product properties

Product type	I/O component
Type	modular Inline
Operating mode	Process data operation with 2 words, PCP with 2 words
Diagnostics messages	Failure of the power supply at $U_{ANA}$ Error message in the process data Failure of or insufficient communications power $U_L$ I/O error message sent to the bus coupler I/O error Error message in the process data User error Error message in the process data

## Electrical properties

### Real-time clock

Description realtime clock	Second, minute, hour, day, month, year 5 years, timer buffered
----------------------------	--

### Potentials

Power consumption	typ. 1 W (Device in nominal operation) max. 2 W (Device with maximum load)
-------------------	---

### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 100 mA typ. 80 mA

### Potentials: Supply of analog modules ( $U_{ANA}$ )

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 50 mA typ. 12 mA (For a typical load of 350 $\Omega$ and display) 43 mA (for a maximum load of 55 $\Omega$ and display)

### Electrical isolation/isolation of the voltage ranges

Test voltage: Logic/analog I/O (digital isolator)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply ( $U_{ANA}$ )/analog I/O (DC/DC converter)	500 V AC, 50 Hz, 1 min
Test voltage: RS-485/analog I/O (isolating distance)	500 V AC, 50 Hz, 1 min
Test voltage: Contacts $PS_a$ - $PS_b$ /analog I/O (isolating distance)	500 V AC, 50 Hz, 1 min
Test voltage: Functional ground/analog I/O (isolating distance)	500 V AC, 50 Hz, 1 min
Test voltage: Logic/24 V supply ( $U_{ANA}$ ) (DC/DC converter)	500 V AC, 50 Hz, 1 min
Test voltage: RS-485/24 V supply ( $U_{ANA}$ ) (DC/DC converter)	500 V AC, 50 Hz, 1 min
Test voltage: Functional ground/24 V supply ( $U_{ANA}$ ) (isolating distance)	500 V AC, 50 Hz, 1 min
Test voltage: Logic/RS-485 (digital isolator)	500 V AC, 50 Hz, 1 min
Test voltage: Functional ground/RS-485 (isolating distance)	500 V AC, 50 Hz, 1 min

# IB IL SGI 1/CAL - Inline terminal



2700064

<https://www.phoenixcontact.com/us/products/2700064>

Test voltage: Logic/contacts PS <sub>a</sub> - PS <sub>b</sub> (optocoupler)	500 V AC, 50 Hz, 1 min
Test voltage: Functional ground/contacts PS <sub>a</sub> - PS <sub>b</sub> (isolating distance)	500 V AC, 50 Hz, 1 min
Test voltage: Logic/functional ground (isolating distance)	500 V AC, 50 Hz, 1 min

## Connection data

### Connection technology

Connection name	Inline connector
-----------------	------------------

### Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	28 ... 16
Stripping length	8 mm

### SMKDS terminals

Connection method	Screw connection
Conductor cross-section, rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup>
Conductor cross-section AWG	26 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C (Type approval according to DIN EN 45501 and OIML R76: -10°C ... 40°C)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
------------------	---------------------------------------

## Mounting

Mounting type	DIN rail mounting
---------------	-------------------

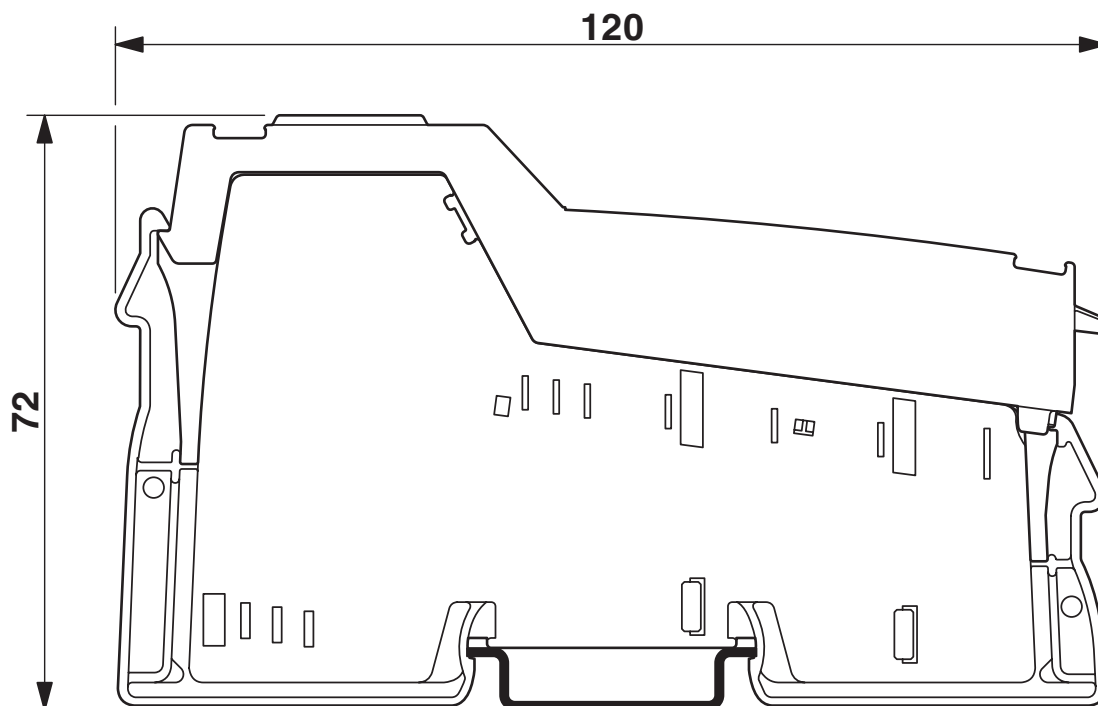
# IB IL SGI 1/CAL - Inline terminal

2700064

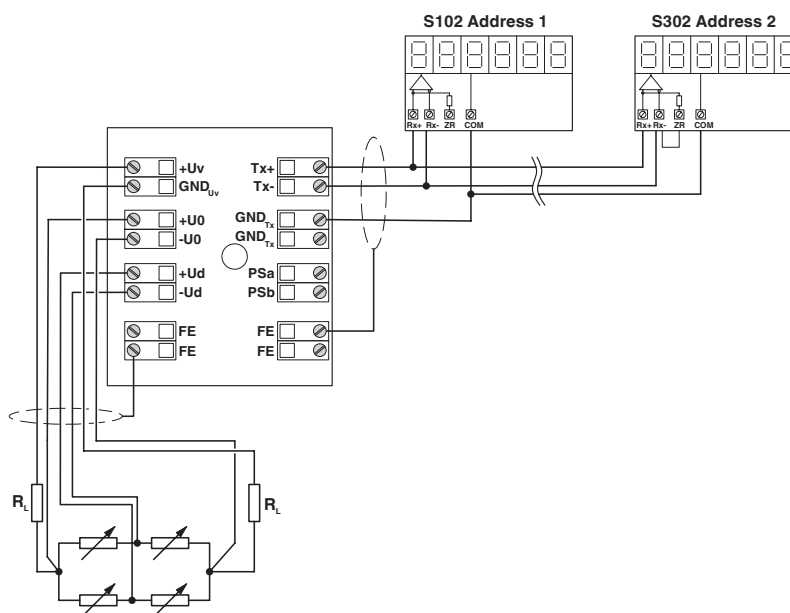
<https://www.phoenixcontact.com/us/products/2700064>

## Drawings

Dimensional drawing



Connection diagram



Connection of strain gauges in 6-conductor technology (calibration set)

# IB IL SGI 1/CAL - Inline terminal



2700064

<https://www.phoenixcontact.com/us/products/2700064>

## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)